

DOUGH STORAGE CONTAINER SYSTEM

BACKGROUND OF THE INVENTION

FIELD OF THE INVENTION

5 This invention deals with a dough storage container system for use in the production of pizza.

DESCRIPTION OF RELATED ART

10 In the pizza industry it is necessary for dough balls or buns to be mass produced and stored on site for use during rush periods. Thus, for example, restaurateurs often must produce large numbers of dough balls, allowing them to rise, and store them in a convenient, easily accessed form for later use.

15 The first part of this process is accomplished primarily using dough proofing/rising pans. Proofing pans are typically round aluminum pans that can be stacked, but cannot be firmly locked together. These pans are inconvenient to use as they take up a substantial amount of counter or shelf space when they are spread out over available surface areas, and cannot be reliably stacked in a manner that will not allow them to easily be knocked over. Moreover, rising dough can overflow from such pans causing a mess and/or cause a pan stack to tip over. The aluminum or other metal tends to dent, which makes stacking more difficult as the pans are used over time, and metal pans need to be oiled to aid release of the dough.

20 In addition to proofing pans, pizza dough trays are often used, especially for more long-term storage. Such trays are typically rectangular with a flat bottom and sides rising high enough to protect dough balls arranged in orderly rows. These trays are usually stackable and allow a large number of proofed dough balls to be stored in a refrigerated environment for use when needed.

SUMMARY OF THE INVENTION

The invention provides a stackable dough storage containment system for secure and convenient use in holding pizza dough during and after the proofing stage, using nesting stackable interlocking pan bodies, with each pan body having an open interior defined by contiguous side walls and a base. A locking system is used for connecting the pan bodies such that any pan body in the stack can be securely connected and locked to another pan body stacked above it and can also be securely connected and locked to another pan body stacked below it. When arranged in this manner, the bottom of each pan body covers the open top of the pan body stacked below it, providing a secure lid for that pan body. For the topmost pan body, a lid using the same locking system is provided.

The locking system of my invention includes locking members positioned on the outside of each pan body near its base. These locking members form a locking connections with locking interfaces located on the outside of each pan body near its top. These connections can take a variety of forms, but in the preferred embodiments illustrated and discussed below, the locking members are radial pins and the locking member interfaces are bayonet joints. This allows each pan body to be dropped into position in the open top of the pan body below and rotated slightly to form a secure connection. The secure joining of the pan bodies creates a seal that prevents the escape of dough, however a vent is provided to release gases generated during the rising process.

The system of the invention also serves to create a secure stack of pan bodies that takes up less space and is resistant to toppling.

BRIEF DESCRIPTION OF THE DRAWING

FIG. 1 provides a side view of a pan body with lid as used in my dough container storage system.

FIG. 2 provides a cross-sectional view of a pan body taken along line 2—2 of FIG. 3.

FIG. 3 provides a view from above of a pan body as used in my dough container storage system.

FIG. 4 provides a side view of a stack of three pan bodies of my dough container storage system with a lid on the uppermost pan body.

FIG. 5 provides a cross-sectional view taken along line 5—5 of FIG. 4.

DETAILED DESCRIPTION OF THE INVENTION

5 As illustrated in FIG. 1, my dough container storage system is based on a unique pan body 1 with a lid 2. As is usual with baking and rising pans, pan body 1 is defined by contiguous side walls 1A and a base 1B. Base 1B defines a bottom for pan body 1 with an open top 1C opposite therefrom. Pan body 1 also has a locking system with interfacing locking elements located on its exterior near its open top 1C and base 1B. This locking
10 system allows pan body 1 to be connected to lid 2 and to other pan bodies in a stack. (See, e.g., pan bodies 11, 21, and 31 in FIGS. 4 and 5).

In the preferred embodiments illustrated, the interfacing locking elements of my locking system use a bayonet joint type drop and twist connection. This system is ideal for use with the type of round pan bodies 1, 11, 21, and 31 illustrated. It allows the base
15 of the round pan body (e.g., base 1B of pan body 1) to be dropped into the open top of a lower pan body and rotated slightly to make a secure connection. (This could not be done if a pan body was, for example, rectangular.) A knurled rim 30 at the top of each pan body 1, 11, 21, 31 assists the user in handling the pan bodies and in rotating the pan bodies during the connection/locking process.

20 Locking members for this system (pins 4, 14, 24, and 34) are positioned on the exterior of, respectively, pan bodies 1, 11, 21, and 31 proximate the base of each. Each of pan bodies 1, 11, 21 and 31 is also provided with locking member interfaces (comprised of, respectively, vertical slots 3, 13, 23, and 33 and horizontal slots 5, 15, 25, and 35). These are positioned on the upper portions 6, 16, 26 and 36 of, respectively, pan bodies 1,
25 11, 21, and 31.

As best illustrated in FIG. 1, the upper portion 6 of a pan body 1 has a slightly wider diameter than the base 1B of the pan body 1. This allows the base of another pan body to rest nest snugly in the upper portion 6 (and open top 1C) of pan body 1 without

settling down into its open interior 7. (This, in turn, preserves open interior 7 for dough proofing and storage purposes). Thus, as exemplified in FIGS. 4 and 5, first pan body 11 can nest snugly in the upper portion 26 of second pan body 21 which, in turn, nests snugly in the upper portion 36 of third pan body 31. In this manner, pan bodies 11 and 21 act as lids for, respectively, pan bodies 21 and 31.

As an option, the uppermost pan body 11 in the stack may be provided with a separate lid 2 with an insertion portion bearing locking pins 9. Alternatively, waxed paper could be laid on top of the dough in the uppermost pan.

In addition, as best illustrated in FIG. 2, the upper portion 6 of a pan body 1 is provided with a vent 8 proximate its top for releasing gases generated during the proofing process. When pan bodies are nested inside each other, vent 8 will be adjacent the base of an upper pan body. This allows gas to escape, but prevents dough from blocking and/or squeezing out of vent 8. The venting can be built into the locking arrangement, as shown, or it could be provided as a weep hole inside the pan.

My invention can advantageously be produced from food safe materials, including plastics such as polypropylene, acrylonitrile butadiene styrene (ABS), or some other thermoplastic such as Noryl® (registered trademark of General Electric). Ideally, interior surfaces should be coated with polytetrafluoroethylene (PTFE) (better known as Teflon® - a registered trademark of DuPont), or can be produced using food safe oil impregnated raw stock for easy release of dough.

In addition, my locking system could use thread locks, dovetail locks, compression locks, or taper twist locks. Numerous other variations are also possible.

Accordingly, it is to be understood that the embodiments of the invention herein described are merely illustrative of the application of the principles of the invention. Reference herein to details of the illustrated embodiments is not intended to limit the scope of the claims, which themselves recite those features regarded as essential to the invention.